IN THE CLAIMS

1. (Previously Presented) A method for detecting molecules, in particular peptides, proteins, carbohydrates, glycoproteins, proteoglycans and nucleic acids, by means of a metal compound in the presence of at least one at least bifunctional agent, said agent having at least one hydrophobic moiety and at least one reducing moiety.

2. (Previously Presented) The method as claimed in claim 1, wherein the bifunctional agent is a molecule of the general formula X--R.

3. (Previously Presented) The method as claimed in claim 1, wherein X is the reducing moiety.

4. (Cancelled)

5. (Previously Presented) The method as claimed in claim 2, wherein X preferably comprises at least one hydroxyl group, at least one sulfhydryl group, at least one carbonyl group, at least one thiosulfate group or at least one unsaturated carbon-carbon bond.

6. (Previously Presented) The method as claimed in claim 2, wherein X is a molecule having antioxidative properties, for example a vitamin, preferably from the group consisting of vitamin A, vitamin C or vitamin E, in particular ascorbic acid.

7. (Previously Presented) The method as claimed in claim 2, wherein R is the hydrophobic moiety.

8. (Previously Presented) The method as claimed in claim 2, wherein R is a saturated or at least monounsaturated hydrocarbon, preferably an acyloxy, amyl or alkyl radical.

9. (Previously Presented) The method as claimed in claim 2, wherein R is the acyloxy radical of the general formula --O--CO--$C_nH_{(2n+1)}$, where n = 8-21, preferably n = 11-17, in particular n = 15.

10. (Previously Presented) The method as claimed in claim 1, wherein the bifunctional agent is ascorbyl palmitate (= palmitoyl ascorbic acid), ascorbyl stearate (= stearoyl ascorbic acid), ascorbyl myristate (myristoyl ascorbic acid) or ascorbyl laurate (lauroyl ascorbic acid).

11. (Previously Presented) The method as claimed in claim 1, wherein the bifunctional agent is present at a final concentration of from 10^{-5} to 1% (w/v), preferably from 10^{-4} to 0.1% (w/v), in particular 5×10^{-4} to 5×10^{-3} (w/v) and preferably 10^{-3}% (w/v), during detection.

12. (Previously Presented) The method as claimed in claim 1, wherein the metal compound is a silver compound, preferably silver nitrate.

13. (Previously Presented) The method as claimed in claim 1, wherein the nucleic acids are DNA or RNA.

14. (Previously Presented) The method as claimed in claim 1, wherein the molecules are applied onto or into a support for detection.

15. (Previously Presented) The method as claimed in claim 14, wherein the support is a gel, in particular a polyacrylamide or agarose gel, a membrane, in particular a PVDF or nitrocellulose membrane, or a microarray support, in particular a biochip.

16. (Previously Presented) The method as claimed in claim 14, wherein detection of the molecules, in particular those present on or in the support, comprises at least the following steps: fixing step, at least one washing step, metal compound step, developing step or stopping step.

17. (Previously Presented) The method as claimed in claim 16, wherein the bifunctional agent is used in the fixing step and, in particular, is present in a fixing solution.

18. (Previously Presented) The method as claimed in claim 14, wherein the bifunctional agent is used in an at least partially alcoholic solution, preferably as a component of the fixing solution, said alcohol preferably being ethanol.

19. (Previously Presented) The method as claimed in claim 14, wherein a complexing agent, preferably EDTA or EGTA, is used in the developing step and, in particular, is present in a developing solution.

20. (Previously Presented) The method as claimed in claim 19, wherein the developing solution comprises a reducing agent, preferably from the group of aldehydes, in particular formaldehyde, sodium carbonate, the complexing agent and/or sodium thiosulfate.

21. (Previously Presented) The method as claimed in claim 1, wherein the detected molecules are characterized, in particular studied mass-spectrometrically, after detection.

22. (Previously Presented) A kit for detecting molecules, comprising an at least bifunctional agent, said agent having at least one hydrophobic moiety and at least one reducing moiety, preferably in a fixing solution.

23-24. (Cancelled)